

*Equal Pull
on all
Elevator
Cables*

Evans Elevator Equalizer

*An Inexpensive
Money Saving Attachment
for Passenger and Freight
Elevators*

Doubles Life of Cables
Increases Safety Factor 50%
Saves Power
Insures Smoother Operation

EVANS
Elevator Equalizer Co.
Bedford, Indiana



Pittsfield Building, Chicago.



Hotel Statler, St. Louis.



Hotel Statler, Detroit.



Hotel Statler, Cleveland.

Mr. Statler Buys Evans Equalizers

Always considerate of the safety and comfort of his guests and his employees Mr. E. M. Statler personally placed and signed an order for Evans Elevator Equalizers, to be installed on all elevators in these hotels—

Hotel Statler, Buffalo
Hotel Statler, Cleveland
Hotel Statler, Detroit

Hotel Statler, St. Louis
Hotel Pennsylvania, New York
Hotel Buffalo, Buffalo

and a Statler-operated office building in Buffalo.



Hotel Pennsylvania, New York.



Hotel Statler, Buffalo.

Importance of Equalization

LET us start by making the easily-proved statement that there is not a multiple cable elevator in operation anywhere in the world (unless it has an Evans Equalizer) in which all ropes are pulling equally at all points on both the up and down trips! We do not expect the most perfect new installation made by the most highly trained crews; though inequalities are apt to grow with age and use.

Causes of Unequal Rope Tension

The unequal pull of cables is due to:

1. The human-element in installing.
2. Initial inequality in diameters of sheave grooves.
3. Wear of grooves and sheaves—caused principally by the slippage of cables.
4. Inequality in cable diameters.
5. Unequal or changing tensile properties or resiliency of cables.
6. Difference in twisting or untwisting of cables.
7. Inequality in the lubrication of cables.

Results of Unequal Cable Tension

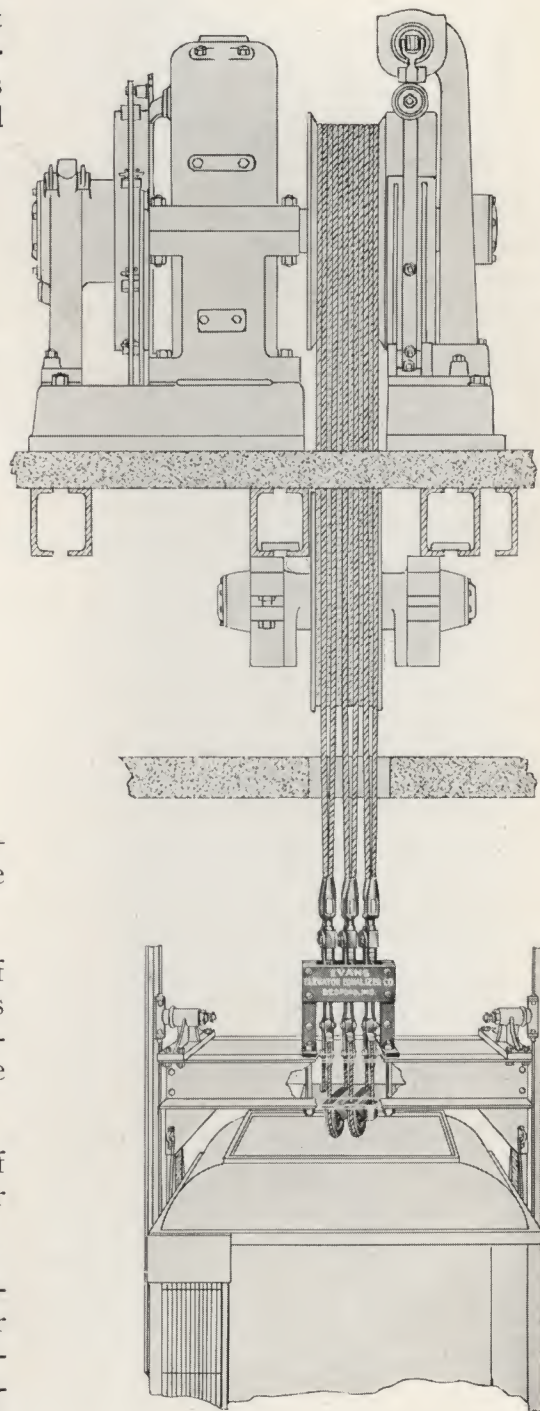
1. When two or more ropes—as is often the case—carry a weight which should be borne by six, the failure of these cables is always imminent.

2. Unequal pull on cables destroys the alignment of the car in the shaft. This wears the shoes on the car as well as the guide rails. Costly replacement is the ultimate result of running cars that are not in perfect line with the guide rails.

3. Faulty alignment also adds to the **power-cost** of lifting elevators that are continually “fighting” their guides.

4. Unequal cable tension, slippage of cables and imperfect balance of car makes it difficult for the operator to control starting and stopping. He is constantly dealing with an unknown and variable factor. Evans-Equipped cars facilitate smooth operation and accurate control.

5. When a car is out-of-balance **noises** are produced which annoy patrons—a bad “advertisement” for any building.



The above cut shows Evans Equalizer attached to the elevator at the top of its travel. Also shows ropes passing through the concrete slot.

The Remedy

THE Evans Equalizer corrects all these faults automatically, second-by-second of time, and foot-by-foot of travel.

The unequal stress on cables on all elevators not thus equipped is strikingly demonstrated by watching the Evans Equalizer in operation on elevators that are so equipped. The sheaves shown at the bottom of the cut are in continual motion, indicating a perpetual readjustment of stresses. And it is by a **test** installation of an Evans Equalizer that we are prepared to prove to anyone disposed to challenge our opening statement that their elevator cable-stresses are **not** evenly distributed.

The Functions of a Cable Equalizer

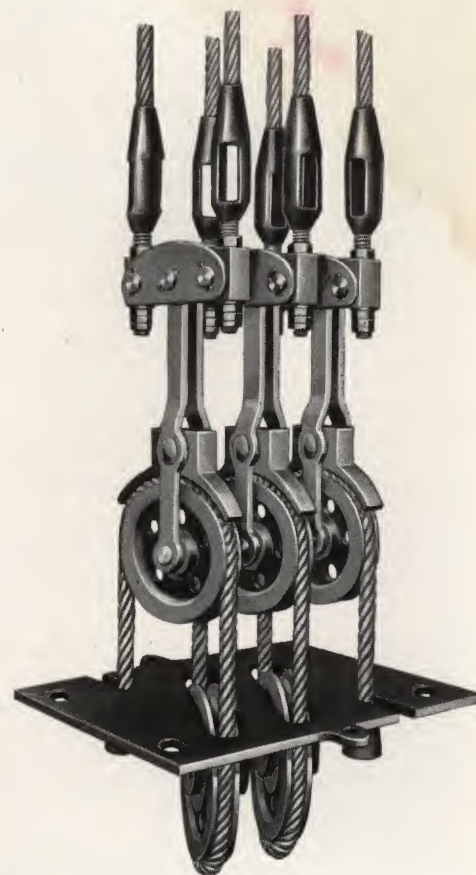
A cable equalizer is, as its name implies, a device which distributes the load equally on all cables. Without such a device the strain is on one or more cables but not on all of them. The Evans Equalizer takes care of any differential travel caused by variable diameter of the grooves, or by oversize or undersize cables. One thirty-second of an inch variation in the diameter of the sheave grooves or in cable diameter will, with twenty turns of the sheave, as the car travels from top to bottom, create a variable travel of the cables of two inches or more.

Even if sheaves are perfect when installed it is only a question of time until the groove diameters are worn to such an extent that the differential travel becomes irregular. This means that a few of the cables carrying the load going in one direction transfer it to the other cables going in the opposite direction. If your cables figure as having a safe working factor of 8 or 10, based on the strength of the cables you may have actually only a safe working factor of 1 to 5. This can not be obviated without the use of an Equalizer which makes the pull equal on all cables.

While it is not offered as a cure-all for every elevator ill the Evans Equalizer puts a stop to so many costly and annoying troubles that its users are all enthusiastic boosters.

Sturdy In Construction

The Evans Elevator Equalizer is constructed of steel throughout and has a much greater safety factor than the parts of the elevator to which it is attached.



The equalizing cable is of special construction, having a breaking strain of $16\frac{1}{2}$ tons for a single cable and 99 tons when compounded. It is extremely flexible, for passing over small sheaves and should last indefinitely providing it is kept lubricated and properly cleaned to prevent rust and corrosion. All sheaves have self-lubricating graphite bronze bushings which tend to minimize friction. The safety factor of these bushings is 10 to 15 over the load strains.

See cut and detailed description on page 9.

The Evans Has No Competitor

THE Evans Elevator Cable Equalizer was designed approximately seven years ago, for the purpose of overcoming difficulties encountered by uneven loading of elevator ropes, due to stretch also to differential travel caused by uneven wear of the elevator sheave grooves. It differs from others, in that it is a combination of the ordinary bar equalizer, commonly used on drum type elevators and an equalizing cable which serves to effect the equalization between the vertical bars in the machine.

Greatly Increase Cable Life

Time and again, by actual test, it has been proved that after installing the Evans Equalizer the cables will show from 40 to 60 percent increase in life. An investment paying 50% dividends has naturally a widespread appeal.

Saves Expense—Increases Mileage

The Evans Equalizer not only reduces the cost of repairs but also the loss of service which occurs when repairs are necessary. Continued use of unequalized cables will wear the grooves unequally. To regroove the sheaves to as near equal diameter as it is possible will cost almost as much as to prevent such trouble for all time by installing the Evans Equalizer.

Saves Power

Read the interview on page 10 with Mr. Walter Jackson, Chief Engineer of the Illinois Merchants Bank Building, Chicago, in which he tells of the extremely low power-factor of his elevators. This saving in power is due to the perfect balance and consequent smooth operation of Evans-equipped Elevators.

Smoother Operation

Equalized cables make for easier operation and smoother performance, because the tractive forces of the cable on the sheave grooves make the car start and stop without slippage of any of the cables. The Evans Equalizer gives a resiliency to the hoisting cables, which becomes a cushion when the car is started or stopped. This is because the weight of the elevator load is always distributed equally on all hoisting cables; a condition which cannot exist when part of the cables are carrying an overload, and the resiliency is being absorbed by the excess weight which the overloaded cables are forced to carry.



Union Central Life Ins. Building
Cincinnati, Ohio

THE UNION CENTRAL LIFE BUILDING Cincinnati

Gentlemen:

We have pleasure in informing you that we installed your first Equalizer five years ago. Since that date we have added to the installation until now we are fully equipped with twelve of them. During this period we have learned that your Equalizers have not only added materially to the wearing value of our cables, but have also contributed largely to the safety and comfort of the passengers carried. We have no hesitation in testifying that they have increased the efficiency of our elevator operation to an extent that more than justifies the added expense.

Yours very truly,
(Signed) W. W. McINTYRE.

Eliminates Rope Slippage and Wear of Sheaves

IT CAN readily be seen that it is a physical impossibility to equalize the strain on elevator ropes without an equalizer when a differential in groove wear exists, because the rope which passes over a higher or lower groove than the others either travels faster or slower as the driving sheave revolves and the load on this rope is increased or diminished accordingly.

This means that the individual ropes must slip to some extent, either forward or backward, to keep somewhere near each other in length as the car travels. This slippage not only wears the ropes excessively but also wears the grooves more and more until it finally becomes necessary to regroove or replace the sheaves. This also causes false stops by the operator, as the traction of the ropes varies in the grooves according to the above condition, making it more difficult to consistently stop the car level with the floors during regular service.

The Evans Equalizer minimizes or practically eliminates this slippage, by its movement as the elevator travels, to compensate for the lengthening and shortening of the ropes as heretofore explained. With the equalizer bars adjusted evenly when the car is at the lower limit of travel, the movement of the bars as the car ascends, and their return to their normal position as the car descends readily shows the amount of differential travel of the ropes which takes place during each trip of the elevator.

Extremely Long Life

This means with the weight of the car, acceleration speeds, and heaviest loads, it will have a safety factor of twelve to fifteen. Its movement is so slight, its safety factor so great, that it should last indefinitely if lubricated regularly.

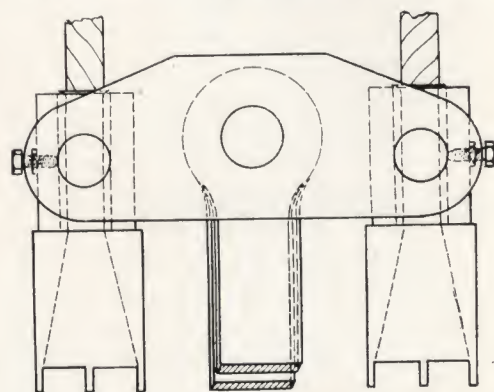


HEYBURN BUILDING
Louisville, Kentucky

*Full Equipment of Evans Elevator
Equalizers Just Ordered*

Shackle Rods Not Necessary

The cut below shows how cables can be attached to equalizer bars without the



use of shackle rods. They are of particular value where the overhead room is limited. Means are provided for tightening the lay of the rope by twisting the socket with a special wrench which we furnish.

How It Equalizes Cable Tension

The Evans Elevator Equalizer hangs all the cables onto an Equalizing assembly instead of on the rigid structure of the car. Each pair of cables is attached to a floating sheave which is hung on an equalizing cable at the bottom of the device. The cut illustrates a 6-cable assembly; but any number of cables or pairs of cables can be provided for.

The tension of the ropes of any pair is equalized by the swing of the Equalizer Bar to which each pair is attached. Then, the tension of these pairs with each other is equalized by the movement of the equalizer cable round its upper and lower sheaves, shown at the bottom of cut. The need for equalization is clearly shown by the motion of the sheaves on the Evans Equalizer.

Use Your Present Cables

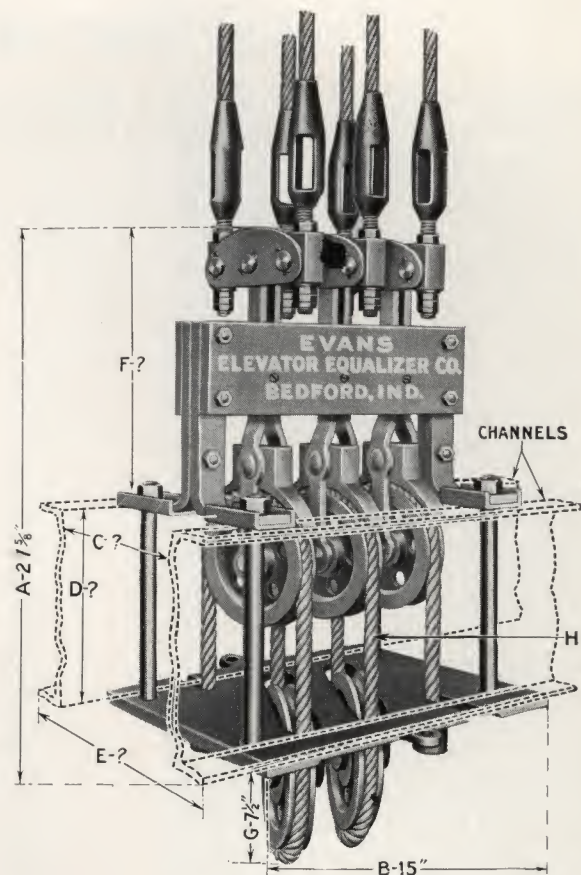
The Evans Equalizer can be installed with your present cables if they are in good condition. Furthermore, when your elevators are thus equalized you can replace ropes, one by one, as they show wear, instead of having to re-cable complete, every time a single rope fails. In other words, every cable can be used, up to the limit of its usefulness and no cable need be discarded until it is completely worn out.

Easy to Install

It is constructed so as to be (handily) clamped to the crosshead channels of the car without drilling of holes. The load is transferred from the hoist ropes of the elevator to the equalizing bars and from them to the equalizing cable which is fastened to a heavy steel plate held in place across the bottom of the crosshead channels, thereby distributing the load to the channels over its entire width.

Safety Stop

The two upright steel safety plates which are bolted and electric-welded together, are for the purpose of keeping the vertical bars in position and are a safety feature in case of breakage of the equalizing cable. In this case the heavy shoulders on the lower part of the



vertical bars would move upward until they engage the lower edge of the safety plate transferring the load from the equalizing cable to the upper part of the machine, which is heavily bolted to the lower plate below the crosshead channels. The safety plates are of sufficient size to carry many times the load to which they may ever be subjected.

When the Evans Equalizer is installed the shackles are locked at the counter-weight so that the cables cannot untwist, and means are also provided to lock the cables at the Equalizer.

Shackles that are not locked will allow the cables to unwind and lengthen. Provision has been made to take care of any undue lengthening of the cable in the Evans Equalizer.

Within 60 days we will be able to lower the overall height at least 6 in. and with the Evans shackles we can take care of any condition of low overhead room. All shackles are charged extra and are not a part of the equalizer.

Partial List of Buildings Using Evans Elevator Equalizers

CALIFORNIA

San Francisco

Merchants Exchange Building

ILLINOIS

Chicago

Illinois Merchants Bank Building
Continental and Commercial Bank Building
Kimball Hall Building
Boston Store
Marquette Building
City Hall
County Building
Otis Building
Pittsfield Building

INDIANA

Anderson

Anderson Bank Building

Fort Wayne

Fairfield Manor Apartments

Indianapolis

Fletcher Saving and Trust Building
J. F. Wild Building
Meyer Kiser Bank Building
Consolidated Building
Century Building

South Bend

Studebaker Auto Company

KENTUCKY

Louisville

Heyburn Building
Belknap Hardware Company

MICHIGAN

Detroit

Buhl Building
First National Bank Building
First National Bank Office & Garage Building
General Motors Building
Dime Savings Bank Building

MISSOURI

St. Louis

City Club Building
Railway Exchange Building
Statler Hotel

NEW YORK

Buffalo

Gerrans Building
Statler Hotel
Buffalo Hotel

New York City

Pennsylvania Hotel
Roosevelt Hotel
Liggett Building
Equitable Building—393—7th Ave.
385 Madison Ave., Webb & Knapp Company
McGraw Hill Publishing Co.
B. Altman & Co.
Howard Apartments—700 W. 175 St.

OHIO

Cincinnati

Union Central Life Building
Union Central Life Building Annex
Chamber of Commerce Building
Havlin Hotel

Cleveland

Hollenden Hotel
Statler Hotel

Columbus

American Insurance Union Building
Guarantee Title & Trust Building

Toledo

Second National Bank Building

TENNESSEE

Knoxville

Tennessee Mill and Mine Supply Company

WISCONSIN

Milwaukee

Milwaukee Athletic Club

Tests in Buhl Building, Detroit

IN ORDER to determine its operating advantages, the management of the Buhl office building, Detroit, installed an Evans Elevator Equalizer on one of its passenger elevators. The following tables show the daily record of performance for 30 days compared with a like period preceding the installation:



(BEFORE Equalizer was Installed)				(AFTER Equalizer was Installed)			
Date	Number	Car	Number	Date	Number	Car	Number
July	Car	Miles	Passengers	Aug.	Car	Miles	Passengers
1927	Stops	Traveled	Carried	1927	Stops	Traveled	Carried
1	2,152	13.7	2,439	8	1,936	12.8	1,620
2	1,122	8.3	928	9	1,778	12.8	1,505
5	2,229	12.5	1,798	10	1,772	12.8	1,513
6	2,034	12.7	1,164	11	1,715	12.8	1,321
7	1,932	12.9	1,594	12	1,794	11.7	1,532
8	2,158	13.1	2,123	13	1,610	12.9	1,476
9	1,692	13.2	1,394	15	1,859	13.3	1,740
11	2,309	13.3	2,069	16	1,846	13.2	1,836
12	2,312	13.2	1,853	17	1,692	12.7	1,780
13	2,339	13.0	1,695	18	1,573	12.7	1,464
14	2,200	13.6	1,761	19	1,687	12.7	1,552
15	2,274	13.8	1,601	20	1,181	9.2	1,167
16	1,588	13.3	1,146	22	1,681	12.4	1,531
18	2,048	12.2	1,661	23	1,832	12.6	1,623
19	2,012	13.1	1,807	24	1,821	13.2	1,570
20	1,984	12.6	1,605	25	1,646	12.2	1,608
21	2,204	12.3	2,009	26	1,823	12.3	1,670
22	2,015	12.4	1,677	27	1,320	13.5	1,116
23	1,732	12.8	1,235	29	1,704	12.5	1,622
25	2,094	12.5	1,648	30	1,630	12.5	1,782
26	2,077	12.5	1,482	31	1,728	12.8	1,660
27	1,971	12.8	1,541	1	1,603	12.1	1,738
28	1,644	10.9	1,238	2	1,685	12.2	1,614
29	2,029	12.8	1,632	3	1,130	13.7	2,951
30	1,729	13.5	1,062	6	1,749	12.8	1,652
Total	49,880	317.0	40,162	Total	41,795	314.4	40,643
Aver.	1,995	12.6	1,606	Aver.	1,671	12.5	1,625

	(Before)	(After)	(% Gain)
Number Stops per Car Mile	157.3	132.9	15.6
Number Stops per Passenger	1.24	1.02	17.8

Cable Slippage Test

In order to determine the cable slippage before the Equalizer was applied, the car was brought to full speed and then was immediately thrown into full reverse. This test was made four times and the average slippage was found to be around two feet.

After the Equalizer was installed the above test was repeated and the slippage was entirely eliminated.

Conclusions

The power factor, or, in other words, the efficiency of the elevator machinery was increased a little over two per cent. While the running time saved by the elimination of the false stops, does not show on the report it was estimated to be about eight per cent. This would mean, on a bank of twelve elevators the saving of practically one car. It would also figure back into fifteen percent less maintenance on the control equipment, where of course the wear and tear comes by the making and breaking of contacts

Tested and Approved by the
Underwriters Laboratories, Inc.
After Exhaustive Engineering Tests

A lengthy report by the Underwriters Laboratories, Inc., dated July 11, 1927, describes the Evans Elevator Equalizer in detail and narrates the manner in which the device was set up and tested to destruction. Following is an exact copy of their

Conclusions

Practicability:

This device is practicable to install and maintain on elevator equipment.

Under Study of Design it has been shown that this device is mounted on the elevator car and held in place by bolts which clamp the device to the elevator car channels without the necessity for drilling holes in the channels. It is, therefore, a simple process to install the device on the car. The Study of Design and the Record in Service both indicate that the device is readily maintained under all conditions.

Durability:

This device may be expected to resist for long periods the effects of wear and tear of corrosion.

The Study of Design shows that the sheaves are fitted with bronze self-lubricating bushings and are supported by pins of ample size. The other portions of the equalizer including the yokes and pull bars are secured together by pins of large size which, under ordinary maintenance conditions involving a reasonable amount of lubrication, should resist the effects of wear and tear and corrosion for a long time. Under ordinary conditions the amount of movement of sheaves assuming the use of a flexible and lubricated equalizer cable, the effects of this motion should be practically negligible. The Record in Service shows that these devices are capable of giving acceptable service over a period of years.

Strength:

The parts and the assembled device are sufficiently strong for the service intended.

The Strength Tests showed that, with standard elevator service cables, the device could withstand a load of 92,000 lbs. at which point one of the cables failed. Replacing the cables by high strength steel rods showed that the car channels, which were of the usual strength, failed by buckling at 120,000 lbs. and that when replaced by heavier channels the device withstood a load of 140,000 lbs. without failure. With the equalizer cable removed, the sheave plate failed at 92,600 lbs. The 140,000-lb. load shows a factor of safety of 11.6 based on a total weight of elevator and load amounting to 12,000 lbs. which represents an average car of 80 sq. ft. figured at 75 lbs. per sq. ft and a load equal to the car weight.

[Note: Further reinforcements, made since these tests, have increased the strength of this plate to a point where it will withstand a 140,000 lb. load without the equalizer cable.]

Uniformity:

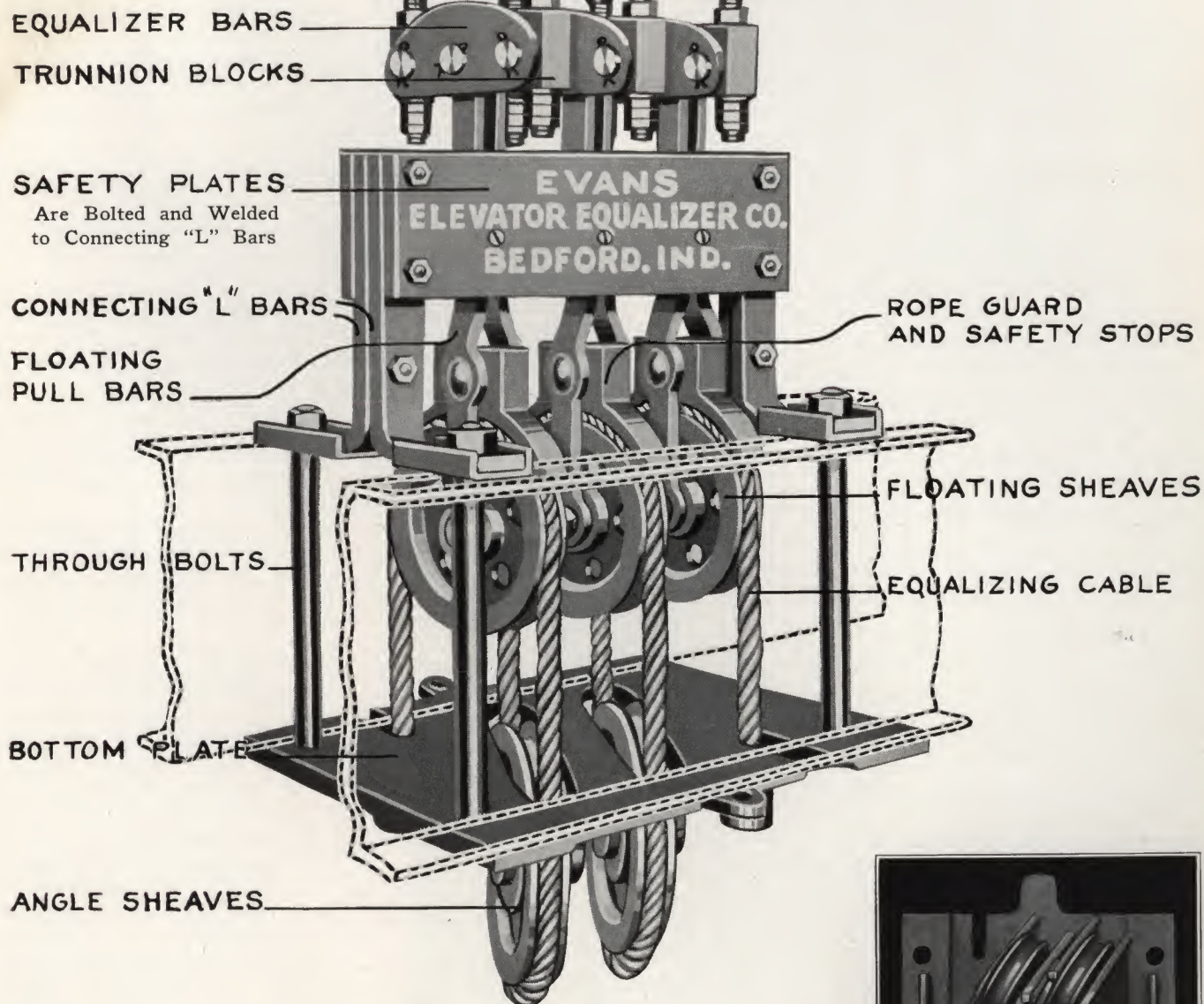
Owing to the simplicity of construction and manufacture it is considered that this device can be readily produced with sufficient uniformity.

Summary

Summarizing the conclusion, this elevator equalizer was found to be practicable and durable; to have sufficient strength to provide an acceptable factor of safety for elevator service; and that it could be uniformly manufactured.

EVANS ELEVATOR EQUALIZER

The turn buckles shown are
not part of the Evans
equipment



Note guides to bottom sheaves which are cast integral with the bottom plate. Also observe that this bottom plate is reinforced at points where stresses are greatest.

The plate tested by the Underwriters (see opposite page) was not thus reinforced. Our new bottom plate will withstand a 140,000 lbs. direct load without the equalizing cable and a much greater load with it.



Under side of bottom plate, showing
reinforcement and sheave guides.

Some Chicago Interviews

[[In order to secure an unbiased expression of opinion from engineers of Chicago buildings we asked an experienced technical editor to call on them and discuss with them the practical advantages of Evans Elevator Equalizers. Some of his interviews follow:]]

New Pittsfield Building, Chicago

Graham, Anderson, Probst, White, Architects.

(See Photograph on Front Cover)

This impressive and artistic building at the South East corner of Wabash Ave. and Washington St. has 14 passenger and two freight elevators—all equipped with Evans Equalizers.

The four elevators which run from basement to the 38th floor in the tower have a lift of 474 ft. Each of these elevators requires more than a mile of rope!

Two other elevators run from street level to the 38th floor. The others have shorter runs.

Mr. C. J. Lehn, Chief Engineer of both this building and the Conway—both owned by the Marshall Field Estate—had this to say:

"I think so much of the Evans Equalizers that I put up a hard fight for them—and won it. Whatever objections one meets come from the elevator builders and not the operating executives. From the standpoint of efficient, economical elevator operation I consider them indispensable."



Illinois Merchants Bank Building, Chicago
24 Evans Elevator Equalizers

Illinois Merchants Bank Building

La Salle, Jackson and Clark Streets
CHICAGO

Walter Jackson, Chief Engineer:

"Evans Equalizers are 100%. They do everything you said they would do. The Evans is the only equalizer that equalizes. Its performance is so perfect and its utility so obvious that I don't see how any engineer or architect can argue against it.

"Since installing it on our 24 elevators two years ago, we have never had a cable go to pieces and have had no repairs of any kind to make.

Its advantages are—

1. It equalizes stress on all cables, lengthening the life of all the ropes.
2. A full-load equalized traction on all cables makes cars easier to handle—with a quicker get-away.
3. The even hang or balance of the elevators saves power. This is demonstrated by the fact that our power consumption on our elevators, averaging both high and low rise, is only 3.08 k.w. per car-mile, as against 4 to 4½ k.w. which is considered good general practice."

This mammoth 21 story office building—one of the largest in the world—has three levels of elevator travel—230 ft., 344 ft., and 360 ft. Figures for last year showed 142,540 car-miles traveled, or an average of about 11,000 miles per car per year. Average running speed is 600 ft. per minute.

Continental and Commercial Bank Building
208 S. La Salle Street
Chicago, Ill.

Said Mr. JACOB ANKLEY, Chief Engineer:

"The Evans Equalizer is the only way to equalize cable tension. Saves sheaves; no slippage; better traction; lengthens life of ropes.

"Have had it in use on part of our equipment for four years, and it has given such good service that we are now preparing to equip our entire fleet of 26 elevators with it.

"We would not think of experimenting with spring equalizers, as no two springs have the same tension. Spring equalizers have not been successful where they have been installed.

"With the Evans each cable always carries the same weight. We are saved the cost of re-grooving driving sheaves—which can easily cost as much as your equalizer each time it has to be done.

"Another advantage is that, with the Evans Equalizer, it is practical to put on new cables with old ones, instead of having to re-cable an entire elevator each time a single rope wears out.

"Elevator inspectors will tell you that when they find it necessary to condemn a set of ropes, they always find two or three good ones—indicating that the other ropes have been doing all the work."

Mr. James McNally, a veteran elevator mechanic who has direct charge of the elevator equipment in this building said:

"When a man has your Equalizer on the top of his cars he does not have any more worry about his cables. It's the finest thing I ever saw for the benefit of elevators. It does away with the unequal hang of elevators which wears out the guide shoes and costs power.

"Our cables on elevators with the Evans Equalizer have run 4 years and 3 months without change; while we have to replace cables on the other elevators every 18 to 24 months.

"When cables are not equalized, the unequal strain on the shackles makes the ropes untwist; and even two untwist turns of a rope makes a full inch slack; which is enough to take the load off the cable. And when ropes untwist that way they never come back."



Continental and Commercial Bank Building
208 South La Salle Street
Chicago, Ill.

OTIS BUILDING
10 South La Salle Street
Chicago, Ill.

Mr. Charles Lange, Chief Engineer, Said:

"If any Engineer has the idea that his elevator cables pull equally without an equalizer, all he needs to do is to get on top of any car at the middle of its run and test rope tension there. No matter how perfect the installation he is sure to find two or three ropes—or perhaps even **one**—doing all the work.

"We have Evans Equalizers on part of our equipment and they are giving such good service that I have recommended their installation on all our cars, to replace the spring hitch which we now have.

"A spring hitch is not an equalizer at all: It is only a cushion and the pull is bound to be unequal because no two springs ever have exactly the same tension.

"Yours is the only real equalizer I have seen thus far. I consider it a wise investment for any building owner."

The elevators in this building have a 232 ft. travel, they are operated at 550 ft. a minute.

Boston Store, Chicago



Department Store elevator requirements make the use of the Evans Equalizer almost a necessity. They carry heavy loads of fussy people and must give earnest consideration to everything that spells the highest degree of control and smooth running of their elevators.

In Chicago the Boston Store is one of the largest department stores in the world. It operates 35 elevators running from the basement to the 17th story.

Anton Jaggle, chief engineer who has been on the job for 30 years was instrumental in having one Evans Equalizer installed some months ago and he is now watching the performance of that device with the keenest interest.

Said he, "We put the equalizer on No. 9 elevator which had been giving us trouble. Its ropes used to slip giving the car an unpleasant jerk. Now that trouble is done away with. Our cars carry from 20,000 to 30,000 live-load. Yet each car has only 6 cables. From the motion of the sheaves on your device I can see that there is constant adjustment going on. Your equalizer is a benefit to any car. The difference in stretch of new ropes on new equipment and the difference in the depth of grooves on the drum always throws unequal loads on the different cables and when equipment grows older these unevennesses grow worse. I hope the management will allow me to equip all my elevators with Evans Equalizers for the good of the service."

KEANE ELEVATOR CO.

2100 W. Van Buren Street
CHICAGO

Mr. M. J. Keane: "In the course of our general elevator installation and repair work, we have equipped something like a hundred elevators with Evans Equalizers.

"Our long experience in dealing with practical elevator problems convinces us that any elevator that has more than three or four cables—should have an equalizer; because, no matter how perfect the equipment, or how skilled the erectors, there is always an unequal stress on the cables, from the very start. This inequality comes from a variety of causes, such as—

1. Unequal stretch of ropes at the start.
2. Inequalities in the grooves in the driving sheaves.
3. Imperceptible differences in the gauge of the ropes.
4. Unequal wear of sheaves, due to slippage or to unequal tensions.
5. Changes in rope-length due to untwisting or to unequal pulling stresses.

All sorts of attempts have been made by elevator manufacturers to compensate for these unavoidable inequalities, but not one of them does the work the way the Evans Equalizer does it. Its factor of safety is high. Its performance is faultless. It is easy to install. It is the life of every elevator it serves.

"The Evans Equalizer is so well built, from such high grade materials that we have had not a single call for repair or replacement in the 4½ years since we installed the first one. It is the only equalizer that does the work."

First National Bank, Detroit

This building installed two Evans Equalizers in 1923, ten a year later, and fourteen additional in 1927—a total of 26 Evans Equalizers. Both C. B. Morgan the superintendent and J. T. Cantlon, Chief Engineer express entire satisfaction with their operation.



The Century Building Company

755 CENTURY BUILDING
INDIANAPOLIS, INDIANA.

September 7th, 1927.

Evans Elevator Equalizer Company,
Bedford, Indiana.

Gentlemen:

I understand that you have lost the cut of my building which I sent you and am therefore sending you another one under separate cover.

I did not have mileage recorders on my elevators long enough to determine the mileage I secured from the elevator cables prior to the installation of your Equalizer and therefore cannot tell how much more mileage I will get. Up to the present time I have 7,347.38 miles on the cables and feel sure that I will get considerable more.

I believe that the cars ride better on account of your equalizer, which is an additional benefit to the increased cable mileage.

Very truly yours,

E. S. Schmidt

Manager.

CFS:MK



KLEIN & KUHN, Inc.
PROPERTY MANAGEMENT
706 S GUARANTY BLDG
INDIANAPOLIS

GEORGE A KUHN

September 7, 1927.

Evans Equalizer Company,
Bedford, Indiana.

Gentlemen:

Replying to your inquiry in reference to the Evans Equalizers installed in the Meyer-Kiser Bank Building, we wish to say that they are operating satisfactorily.

While we confidently expect increased cable mileage, our present cables have not been in operation long enough to furnish this data.

Yours very truly,

KLEIN & KUHN, INC.
George A. Kuhn

GAK/k

Fletcher
Savings and Trust Company
Indianapolis

August 22nd, 1927

Evans Elevator Equalizer Company,
Bedford, Indiana,

Gentlemen:-

In reply to your inquiry of recent date we are pleased to advise we have had your equalizers in service about three years. We have been unable to determine the extended life of our cables since installation of this device as we have had no reason to change cables.

We have had a number of inquiries concerning these equalizers and are always glad to advise the satisfactory manner in which they are serving us.

Very truly yours,

FLETCHER SAVINGS & TRUST CO.,

E. A. West

Building Manager.

EAW/GP

CAPITAL AND SURPLUS TWO AND A HALF MILLION
MEMBER FEDERAL RESERVE SYSTEM



J. F. WILD AND COMPANY
A STATE BANK

123 EAST MARKET STREET
INDIANAPOLIS, IND.

August 26, 1927

DEALERS IN
GOVERNMENT AND
MUNICIPAL BONDS
AND OTHER
HIGH GRADE SECURITIES

Evans Elevator Equalizer Co.,
Bedford, Indiana.

Gentlemen:

To those who are interested in the life of your elevator ropes; we installed the Evans Equalizer on our cars in the J. F. Wild Building August of 1925, at the same time renewed the cables. That has been now over two years and the ropes are showing very little wear at this time. I think it is going to let us get much more wear out of our ropes, as the strain is the same on all ropes.

We also find that we do not have trouble with the cars sliding over the drum as the pull is equal on all cables. We are very much pleased with the Equalizer.

Yours very truly,

J. F. WILD AND COMPANY

J. P. Davidson
Supr.

P. S. I am not at this time able to find a out of the building.



OFFICERS AND DIRECTORS
 WILLIAM H. BURN, President
 JAMES H. BURN, Vice President
 JOSEPH J. BURN, Secretary
 CHARLES W. BURN, Treasurer
 LUTHER H. BURN, Vice President
 DE C. BURN, Secretary
 WILLIAM C. BURN, Vice Secretary
 CHARLES B. BURN, Treasurer

ESTABLISHED 1840 INCORPORATED 1880

OFFICERS AND DIRECTORS
 CHARLES B. BURN, President
 JAMES H. BURN, Vice President
 JOSEPH J. BURN, Secretary
 CHARLES W. BURN, Treasurer
 LUTHER H. BURN, Vice President
 DE C. BURN, Secretary
 WILLIAM C. BURN, Vice Secretary
 CHARLES B. BURN, Treasurer



September 7, 1927

The Evans Elevator Equalizer Co.,
 Bedford, Indiana.

Gentlemen:

We would like to say in regard to the Evans Equalizers, which we installed in two passenger elevators in Warehouse No. 12, serving the offices on the eleventh floor, the sample rooms on the tenth floor and the cafeteria and recreation rooms on the twelfth floor, that we have found that your equalizers serve the purpose for which they are intended, fully.

They were installed in January, 1927, and have been continuously in operation since that time and we have not had any cables to replace in that time and no broken strands.

This we consider a very good record.

Yours very truly,

Belknap Hardware & Mfg. Co.

W. H. BURN
 President



INDIANAPOLIS.
 August eleventh,
 Nineteen Twenty-seven.

Evans Elevator Equalizer Co.,
 Bedford, Indiana.

ATTENTION - MR. J. E. EVANS.

Gentlemen:-

With reference to your Elevator Equalizers will say that we consider them the best cable saving device on the market today

We put Evans Equalizers on our passenger elevators May 26th - 1924.

Our elevators will average twenty miles per day, and after the cables are stretched and properly adjusted, they require little or no attention.

We feel safe in saying that with proper adjustment upon installation they will treble the life of any cable.

Sincerely yours,
 HOTEL WASHINGTON.

Edwin R. Spooner
 Edwin R. Spooner,
 General Manager.

ERS/FR.

"SEE AMERICA FIRST"

WRITTEN FROM
 HOTEL WASHINGTON

Evans Car Hanger

A Decided Labor and Time Saver!

For Hanging Car While Shortening or Putting on New Cables

WE DEvised the Evans Hanger for our own use in installing the Evans Equalizers and had no intention of offering it for sale. But engineers and managers of one building after another who noted the ease and speed with which our crews operated it wouldn't permit us to take it away and requested that we put a price on it.

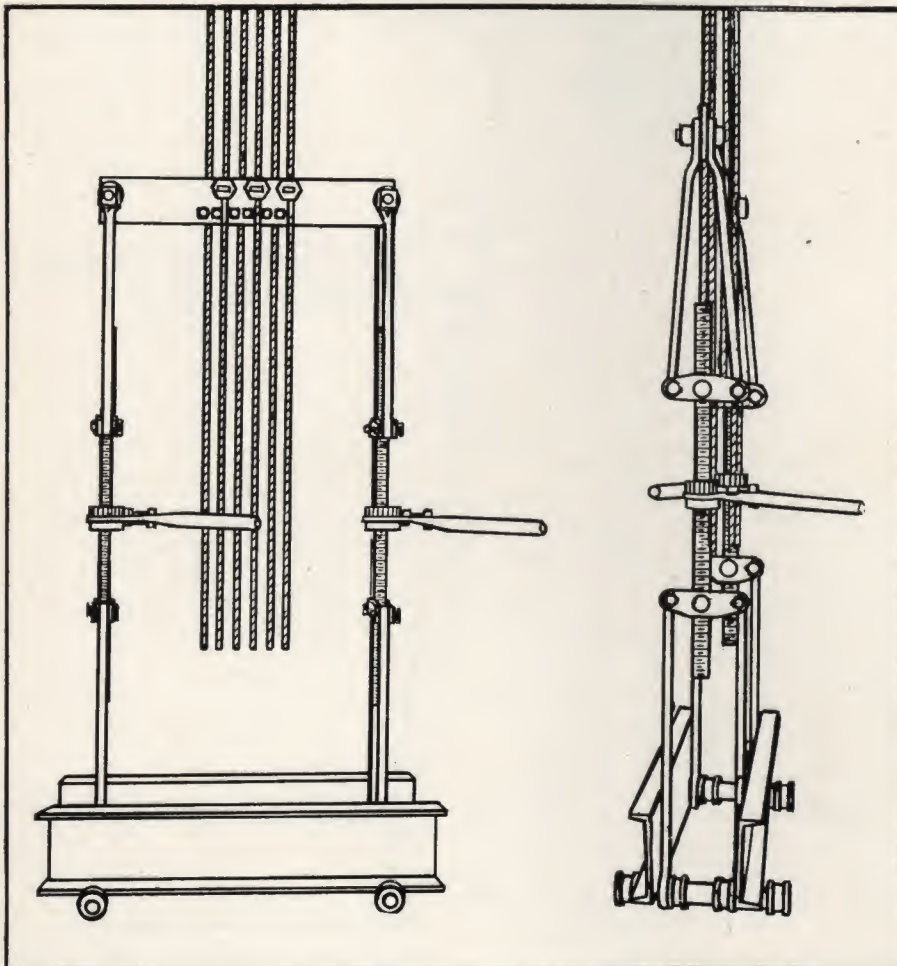
It eliminates the expense and danger of use of heavy chains and tackles. It makes it unnecessary to block the counterweights. It saves several hours' time of a crew of men every time ropes are replaced or shortened.

It throws the weight of the elevator on all cables while it is being operated, instead of upon one or several—an important safety-measure.

Building engineers and their crews welcome it because it makes relatively easy one of the hardest and most dangerous jobs they have to do in connection with elevator maintenance work.

Building managers appreciate the fact that its use greatly shortens the out-of-service time of their elevators. This is particularly important when it becomes necessary to shorten or replace cables during the busy period.

Any building operating several elevators will find this car hanger a time and labor saving investment whether or not the elevators be equipped with equalizers. In fact, it is of more advantage to the building not equipped with equalizers, as cable changing and shortening is a more frequent necessity, when Evans Equalizers are not in use.



Lemcke Buildings

Indianapolis

V. A. Swain, Superintendent, Lemcke Building and Lemcke Annex, Indianapolis, says:

In answer to your inquiry of the 22nd as to what we think of the service rendered by the Evans Elevator Equalizer, we are pleased to give you the following information:

We installed the first Equalizer about five and a half years ago, and at the time we installed same our cables were condemned to be taken out of service within thirty days. We installed the Equalizers and the cables passed all inspections for two and a half years additional service. We removed the cables without being condemned, for the reason, we thought they had given enough service to almost pay for the Equalizer.

We feel quite safe in making the statement that we know we would have been compelled to remove the cables within the thirty days after they were condemned, had it not been for the Equalizer, for the reason that our drum was in rather poor condition, due to irregular diameter of the drum grooves, which were badly worn. The Equalizer took care of the irregular drum grooves, and gave the added service.

We are pleased to recommend your Equalizer to any one that is responsible for good elevator service. We feel it will add at least 50% to the average life of the cables and the safety factor of the elevator.

You have our permission to refer any one to us.

Odd Fellows Building

Indianapolis

R. H. Hollywood, Manager, Odd Fellows Building, Indianapolis, under date of March 13, 1927, says:

About three years ago we installed one of your Evans Equalizers on our No. 1 elevator. This Equalizer has proved itself so satisfactory and has convinced us so thoroughly that it has prolonged the life of our elevator cables, and has given such comfort and added safety to our passengers, that we wish you would enter our order for two more Equalizers, which we intend to install as soon as received.


City Hall, Chicago

John C. Hayes, Chief Engineer, when asked for his opinion about Evans Equalizers, said—"I got 'em on; isn't that enough?"

This installation includes 14 elevators each with six 670 ft. cables. Elevators are very large, and carry full loads from morning till night. The Starter, when asked his opinion said: "Those Equalizers are 18 karat —100%—as far as operation is concerned.

Cars run easier. No more trouble with sticking."

B.D. 11 10M 5-27 560



WM. HALE THOMPSON
MAYOR

CITY OF CHICAGO
DEPARTMENT OF BUILDINGS
ROOM 702, CITY HALL

CHRISTIAN P. PASCHEN
COMMISSIONER

ROBERT KNIGHT
DEPUTY COMMISSIONER

PETER C. HOEY
SECRETARY

August 10th, 1927.

In reply to your inquiry of recent date concerning the approval of the Evans Equalizer installed on the fourteen (14) Passenger Elevators several months ago in the City Hall, Chicago, would say they have been inspected and approved of by the Elevator Inspection Bureau, and from the date of the installation to the present date have given entire satisfaction.

Very truly yours,

Frank Gaynor
Chief Elevator Inspector.

Approved by -
Christian P. Paschen
Commissioner of Buildings.

CPP:AFR

County Building, Chicago

Seven out of 14 elevators in this building are Evans Equipped. Officials interviewed spoke highly of their performance but declined to permit the use of their names; as it is "against the rules to give testimonials." The elevators are extra large and are given hard service, as the county courts are all on upper floors.

Also approved by the Elevator Inspection Departments of the following cities:

New York
Detroit
Cleveland
Columbus

Indianapolis
Louisville
Cincinnati
St. Louis

Architects Commend the Evans Equalizer

The best friends we have are architects who have become familiar with the economies effected by the Evans Elevator Equalizer.

Some of America's leading architectural concerns now specify Evans Equalizers for the entire elevator equipment of all large buildings they design.

We co-operate with architects and engineers to the fullest degree and simplify their problems by furnishing complete instructions for installation easily understood by any contractor.

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